### Specifications

<table>
<thead>
<tr>
<th></th>
<th>Metric</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Power Ratings</td>
<td>635 bhp</td>
<td>474 kW</td>
</tr>
<tr>
<td>Governing RPM</td>
<td>2100</td>
<td>2100</td>
</tr>
<tr>
<td>Number of Cylinders</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Bore and Stroke</td>
<td>5⅜&quot; x 6&quot;</td>
<td>140 x 152mm</td>
</tr>
<tr>
<td>Piston Displacement</td>
<td>1770 cu. in.</td>
<td>28l</td>
</tr>
<tr>
<td>Operating Cycles</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Lube System Oil Cap</td>
<td>18 U.S. gals.</td>
<td>68 l</td>
</tr>
<tr>
<td>Coolant Capacity</td>
<td>30 U.S. gals.</td>
<td>114 l</td>
</tr>
<tr>
<td>Net Weight with Std. Accessories, Dry</td>
<td>3568 lbs.</td>
<td></td>
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</tbody>
</table>

### Design Features

Bearing: Precision type, steel backed inserts. 7 main bearings, 5½" (140mm) diameter. Connecting Rod - 3½" (95mm) diameter.

Camshaft: Dual camshafts control all valve and injector movement. Induction hardened alloy steel with helical gear drive.

Camshaft Followers: Roller type for long cam and follower life.

Connecting Rods: Drop forged, 12" (305mm) center to center length. Rifle drilled for pressure lubrication of piston pin. Taper piston pin end reduces unit pressures.

Cooler, Lubricating Oil: Tubular type, jacket water cooled.

Crankshaft: High tensile strength steel forging. Bearing journals are induction hardened. Fully counterweighted.

Cylinder Block: Alloy cast iron with removable, wet liners.

Cylinder Heads: Each head serves three cylinders. Drilled fuel supply and return lines. Corrosion resistant inserts on intake and exhaust valve seats.

Dampener, Vibration: Compressed rubber type.

Fuel System: Cummins P7™ wear-compensating system with integral, flyball type, mechanical variable speed governor. Camshaft actuated injectors.

Gears: Heavy duty, located at front of cylinder block.

Lubrication: Force feed to all bearings, gear type pump.

Pistons: Aluminum, cam ground, with four compression rings.

Piston Pin: 2" (51mm) diameter, full floating.

Thermos: Two, individual unit modulating by-pass type.

Turbochargers: Two, Cummins, top mounted.

Valves: Dual intake and exhaust each cylinder. Each valve 1½" (40mm) diameter. Heat and corrosion resistant face on intake and exhaust valves.
Standard Equipment

Cleaner, Air: Two, 15" (381mm) diameter, dry type, mounted.

Cooling System: Mounted expansion tank for keel cooling.

Corrosion Resistant: Mounted, spin-on type, checks rust and corrosion, controls acidity, and removes impurities from coolant.

Dipstick, Oil: Starboard side when viewing engine from drive end.

Electrical Equipment: 24 volt, 60 ampere negative ground system, includes starting motor, alternator, regulator, and starting switch.

Filters: Lubricating oil, full flow replaceable paper element type, mounted and by-pass type, not mounted.

Flywheel: For reverse and reduction gear.

Governor: Mechanical variable speed type.

Housing, Flywheel: S.A.E. No. 0 with marine mounting parts.

Manifold, Air Intake: Two, each connected to a turbocharger.

Manifold, Exhaust: Two, water cooled. Each connected to a turbocharger.

Pan, Oil: Aluminium, rear sump type, 18 U.S. gallon (68 litre) capacity.

Pump, Coolant: Belt driven, centrifugal type, 220 U.S. gpm (833 l/min.) @ 2100 rpm.

Shield, Belt: Fabricated steel.

Starting Aid: Air manifold preheater assembly.

Support, Engine: Marine type, front and rear.

Optional Equipment

Dipstick, Oil: Port side when viewing engine from drive end.

Electrical Equipment: 24 volt, 60 ampere system: 32 volt, 60 ampere system.

Exchanger, Heat: Tubular type, not mounted.

Gear, Marine: Twin Disc MG-521, 2.19:1 or 3.01:1 ratio; Twin Disc MG-627, 5.17:1 ratio; Capitoll PFC-3000, 4.00:1, 4.66:1 or 6.11:1 ratio; Capitoll HPD-200V, 1:1 ratio.

Panel, Instrument: Side mounted. Includes ammeter, tachometer, hourmeter, engine water temperature gauge, engine oil pressure gauge, and engine oil temperature gauge.

Power Take-Off: Front mounted. Twin Disc clutch model SP-114 for up to 150 h.p., SL-114 for up to 200 h.p. (149 kW).

Pump, Raw Water: 125 U.S. gpm (473 l/min.) @ 2100 rpm.

Switches, Marine: Low oil pressure and high water temperature.
Big Displacement Design Features

1. Internal Fuel Lines: Drilled passages in cylinder heads eliminate threaded fuel line connectors and external lines.

2. Large Intake and Exhaust Passages: Minimize restriction of air and exhaust flow. Allows maximum air charge for clean burning, top economy.

3. Overhead Valves: Precision machined from high strength alloy steel. Intake and exhaust valves of big displaced engines are Nitrogen steel for high temperature strength and are faced with corrosion-resistant materials.

4. Open Type Combustion Chamber: Gives highest combustion efficiency... most power from each gallon of fuel.

5. Replaceable Wet-type Cylinder Liners: Dissipate heat faster. Liners are easily replaced without reboiling block.

6. Conventional Push Rod and Rocker Lever Arrangement: Activates valves and injectors from dual camshafts. Roller type camshaft followers are used for long life.

7. Cam-ground Pistons: Assure perfect fit at operating temperatures.

8. Alloy Cast Iron Cylinder Block: Follows proven design and material specification to achieve maximum durability.

9. Large Volume Water Passages: Give even flow of coolant around cylinder liners, valves, and injectors to draw excess heat from combustion chamber. Centrifugal pump circulates large volumes of water.

10. Connecting Rods: Forged from high tenacity strength alloy steel. Tapered section gives maximum strength. Large diameter piston pins are full-floating. Tapered piston pin end used for superior load distribution and maximum crown material on the piston.

11. Counterweighted Crankshaft: Precision machined from high tenacity strength steel forgings. Bearing journals are induction-hardened for long life.

Medium Duty Commercial Performance

Continuous Duty Performance

These performance curves represent the performance available for the specified ratings at 500 feet (150m) altitude, 25.00 in. (635mm) Hg dry barometer, 85°F (29°C) Intake air temperature, and 0.30 in. (8.1mm) Hg water vapor pressure (S.A.E. 2816b test conditions).

Fuel consumption curves based on fuel weight of 7.0 lbs./U.S. gallon (0.94 kg/).